

WHAT IS CLAIMED IS:

1. An asynchronous transfer mode connection band control method in a system for transmitting and receiving an asynchronous transfer mode cell using an asynchronous transfer mode network,
5 comprising:

first step of preliminarily setting a connection band as band acquiring data for preferential switched virtual connection having high preference in the asynchronous transfer mode network among connections of an asynchronous transfer mode
10 service categories requiring a fixed band, of constant bit rate, in which a traffic is generated at a constant interval in the switched virtual connection via the asynchronous transfer mode network, and a real time variable bit rate or non-real time variable bit rate generating a variable traffic having burst
15 characteristics in transmission rate, such as variable rate video or public network frame relay service; and

second step of controlling the connection band including said band acquiring data for enabling cooperation with a connection admission control for said constant bit rate, said
20 real time asynchronous transfer mode and said real time variable bit rate and said non real-time variable bit rate, and performing reception control under a condition where the band for said preferential switched virtual connection is constantly acquired, with controlling the connection band in a range where a band
25 for said preferential switched virtual connection is constantly

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acquired and guaranteed, a band for a non-preferential switched virtual connection can be constantly acquired upon said connection admission control for said non-preferential switched virtual connection.

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2. An asynchronous transfer mode connection band control method as set forth in claim 1, wherein, in said first step, the connection band of said constant bit rate, said real time variable bit rate and said non-real time switched virtual connection, is preliminarily set and stored in a buffer control memory irrespective whether a connection of said preferential switched virtual connection is established or not, and in said second step, control is performed with taking said preliminarily set band acquiring data and data necessary for said connection admission control of other connection including the connection band of said switched virtual connection used currently and data necessary for connection admission control.

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3. An asynchronous transfer mode connection band control method as set forth in claim 1, wherein, in said second step, upon reception of a signal for setting demand of new switched virtual connection from a calling terminal, judgment is made whether said switched virtual connection is the preferential switched virtual connection having high preference and having band being acquired.

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4. An asynchronous transfer mode connection band control method as set forth in claim 3, wherein, in said second step, when said new switched virtual connection setting demand from
5 said calling terminal is for a non-preferential switched virtual connection, connection band is controlled within a range where the band of said preferential switched virtual connection is certainly maintained irrespective whether the connection of
10 said preferential switched virtual connection, for which the band is already reserved, is established or not by cooperation of a connection reception control processing portion and a connection band controller.

5. An asynchronous transfer mode connection band control
15 method as set forth in claim 3, wherein, in said second step, when the new switched virtual connection from said calling terminal is the preferential switched virtual connection, for which band has already been reserved, connection admission is controlled under a condition where a band of said preferential
20 switched virtual connection within a range where the band of the preferential switched virtual connection is certainly maintained.

6. An asynchronous transfer mode connection band control
25 method as set forth in claim 1, wherein data of connection band

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of said preferential switched virtual connection of said constant bit rate, said real time variable bit rate and said non-real time variable bit rate is set irrespective whether the connection for said switched virtual connection is
5 established or not, and for the preferential switched virtual connection, connection admission control and connection band control are performed for constantly acquiring the band.

7. An asynchronous transfer mode connection band control
10 system in a system for transmitting and receiving an asynchronous transfer mode cell utilizing an asynchronous transfer mode network, comprising:

data storage means for storing a connection band of a preferential switched virtual connection having high preference
15 in said asynchronous transfer mode network being stored preliminarily as a band acquiring data and storing acquired band data of a switched virtual connection currently established connection; and

connection band control means for performing control of
20 connection band on the basis of a total number of bands derived by a sum of said band acquiring data and said acquired band data stored in said data storage means.

8. An asynchronous transfer mode connection band control
25 system as set forth in claim 7, wherein said connection band

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control means adds said band acquiring data of the connection band of the switched virtual connection when setting demand for acquiring the connection band for the switched virtual connection is issued and the demand is admitted.

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9. An asynchronous transfer mode connection band control system as set forth in claim 7, wherein said connection band control means transfers the connection band data of demanded switched virtual connection from said band acquiring data to said acquired band data when the switched virtual connection setting demand is issued and the switched virtual connection for which setting demand is issued is the preferential switched virtual connection, for which band data is preliminarily acquired.

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10. An asynchronous transfer mode connection band control system as set forth in claim 7, wherein said connection band control means makes judgment whether the switched virtual connection setting demand is to be admitted or not on the basis of a total number of bands derived by a sum of said current band acquiring data and the acquired band data when the switched virtual connection setting demand is issued and the switched virtual connection for which setting demand is issued, is not the preferential switched virtual connection, for which band data is preliminarily acquired.

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11. An asynchronous transfer mode connection band control system as set forth in claim 10, wherein said connection band control means adds the connection band data of the switched
5 virtual connection in said acquired band data when said switched virtual connection setting demand is admitted.

12. An asynchronous transfer mode connection band control system as set forth in claim 7, wherein said connection band
10 control means transfers the connection band data of the switched virtual connection from said acquired band data to said band acquiring data when a switched virtual connection deletion demand is issued and the switched virtual connection is the preferential switched virtual connection for which the band
15 data is preliminarily acquired.

13. An asynchronous transfer mode connection band control system as set forth in claim 7, wherein said connection band control means performs band control not only for said switched
20 virtual connection but also for a permanent virtual connection.

14. An asynchronous transfer mode connection band control system as set forth in claim 7, which further comprises asynchronous transfer mode switching means, said asynchronous
25 transfer mode switching means includes connection setting

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control means for controlling setting of connection of the preferential switched virtual connection preliminarily set a necessary band as band acquiring data.

- 5 15. An asynchronous transfer mode connection band control method in a method for transmitting and receiving an asynchronous transfer mode cell utilizing an asynchronous transfer mode network, comprising:

providing data storage means for storing a connection
10 band of a preferential switched virtual connection having high preference in said asynchronous transfer mode network being stored preliminarily as an band acquiring data, and storing acquired band data of a switched virtual connection currently established connection; and

15 connection band control step of performing control of connection band on the basis of a total number of bands derived by a sum of said band acquiring data and said acquired band data stored in said data storage means.

- 20 16. An asynchronous transfer mode connection band control method as set forth in claim 15, wherein said connection band control step adds said band acquiring data of the connection band of the switched virtual connection when setting demand for acquiring the connection band for the switched virtual
25 connection is issued and the demand is admitted.

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17. An asynchronous transfer mode connection band control method as set forth in claim 15, wherein said connection band control step transfers the connection band data of demanded
5 switched virtual connection from said band acquiring data to said acquired band data when the switched virtual connection setting demand is issued and the switched virtual connection for which setting demand is issued is the preferential switched virtual connection, for which band data is preliminarily
10 acquired.

18. An asynchronous transfer mode connection band control method as set forth in claim 15, wherein said connection band control step makes judgment whether the switched virtual
15 connection setting demand is to be admitted or not on the basis of a total number of bands derived by a sum of said current band acquiring data and the acquired band data when the switched virtual connection setting demand is issued and the switched virtual connection for which setting demand is issued, is not
20 the preferential switched virtual connection, for which band data is preliminarily acquired.

19. An asynchronous transfer mode connection band control method as set forth in claim 18, wherein said connection band
25 control step adds the connection band data of the switched virtual

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20. An asynchronous transfer mode connection band control
5 method as set forth in claim 15, wherein said connection band
control step transfers the connection band data of the switched
virtual connection from said acquired band data to said band
acquiring data when a switched virtual connection deletion
demand is issued and the switched virtual connection is the
10 preferential switched virtual connection for which the band
data is preliminarily acquired.